

Having described the invention, we claim:

1. A communication system comprising:

a device management computer;

a data concentrator computer for

communicating with said device management computer;

a gateway device for communicating with said

data concentrator computer; and

a plurality of mobile data acquisition

devices, each of said plurality of mobile data

acquisition devices communicating with said gateway

device,

said gateway device performing pre-processing functions on data collected by said plurality of mobile data acquisition devices prior to transferring the data to said data concentrator computer.

2. The system as set forth in claim 1 further including a workstation for communicating with said gateway device.

3. The system as set forth in claim 2 wherein said workstation provides access to resources of said

workstation by said plurality of mobile data acquisition devices through said gateway device.

4. The system as set forth in claim 1 wherein each of said plurality of mobile data acquisition devices includes a processor, a memory, a display, a keyboard, and a battery.

5. The system as set forth in claim 1 wherein each of said plurality of mobile data acquisition devices performs a batch download of said data to said gateway device.

6. The system as set forth in claim 1 wherein each of said plurality of mobile data acquisition devices performs a real time download of said data to said gateway device.

7. The system as set forth in claim 1 wherein said gateway device converts said data to an appropriate interface for transferring said data to said data concentrator computer.

8. The system as set forth in claim 1 wherein said gateway device provides communication to a printer.

9. The system as set forth in claim 1 wherein said gateway provides communication to a diskette drive.

10. The system as set forth in claim 1 wherein said data concentrator computer is dedicated to a single software application.

11. A system for transferring data, said system comprising:

a device management computer;  
a data concentrator computer for communicating with said device management computer;  
a gateway device for communicating with said data concentrator computer; and  
a plurality of data acquisition devices, each of said plurality of data acquisition devices communicating with said gateway device,  
said gateway device performing pre-processing functions on data collected by said plurality of data

acquisition devices prior to transferring the data to said data concentrator computer,

    said data concentrator computer processing and storing data collected by said plurality of data acquisition devices.

12. The system as set forth in claim 11 wherein said data concentrator computer supports initial communication from said plurality of data acquisition devices.

13. The system as set forth in claim 11 said device management computer includes an information database containing configuration data of each of said plurality of data acquisition devices.

14. The system as set forth in claim 11 wherein said device management computer distributes software packages to said data acquisition devices through said data concentrator computer.

15. The system as set forth in claim 11 said device management computer maintains a history database for generating management reports.

16. A computer program product for controlling a communication network, said computer program product comprising:

a first instruction for collecting transaction log files of a plurality of mobile devices by a device management computer;

a second instruction for receiving a software package from the device management computer by a data concentrator computer;

a third instruction for performing a self test by a gateway device and sending results of the self test to a workstation;

a fourth instruction for decrypting data from the gateway device by the workstation; and

a fifth instruction for synchronizing time between the plurality of mobile devices, the gateway device, the device management computer, the data concentrator computer, and the workstation.

17. The computer program product as set forth in claim 16 further including a sixth instruction for receiving a software update from the data concentrator computer by the gateway device.

18. The computer program product as set forth in claim 17 further including a seventh instruction for processing commands of the plurality of mobile devices by the gateway device.

19. The computer program product as set forth in claim 18 further including an eighth instruction for initiating local messaging by the plurality of mobile devices.

20. The computer program product as set forth in claim 19 further including a ninth instruction for providing a date and a time by the gateway device.